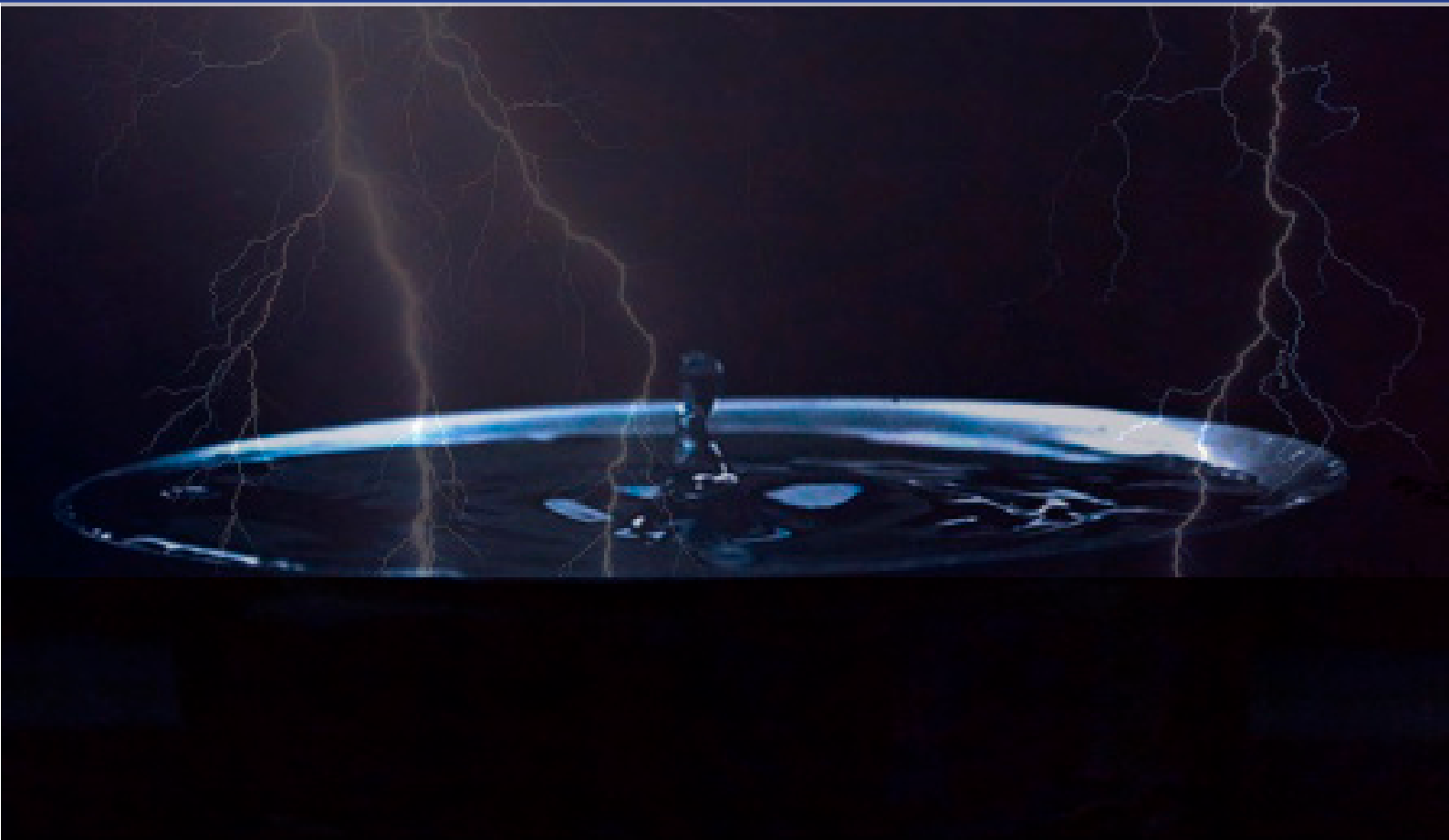


MARKET SURVEY

OIL AND GAS



Caracas, May, 2016
Bolivarian Republic of Venezuela



May, 2016

Survey by **AL&C** Consulting Group
for the Embassy of India in Caracas- Venezuela

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PART I

ECONOMIC SITUATION OF THE BOLIVARIAN REPUBLIC OF VENEZUELA

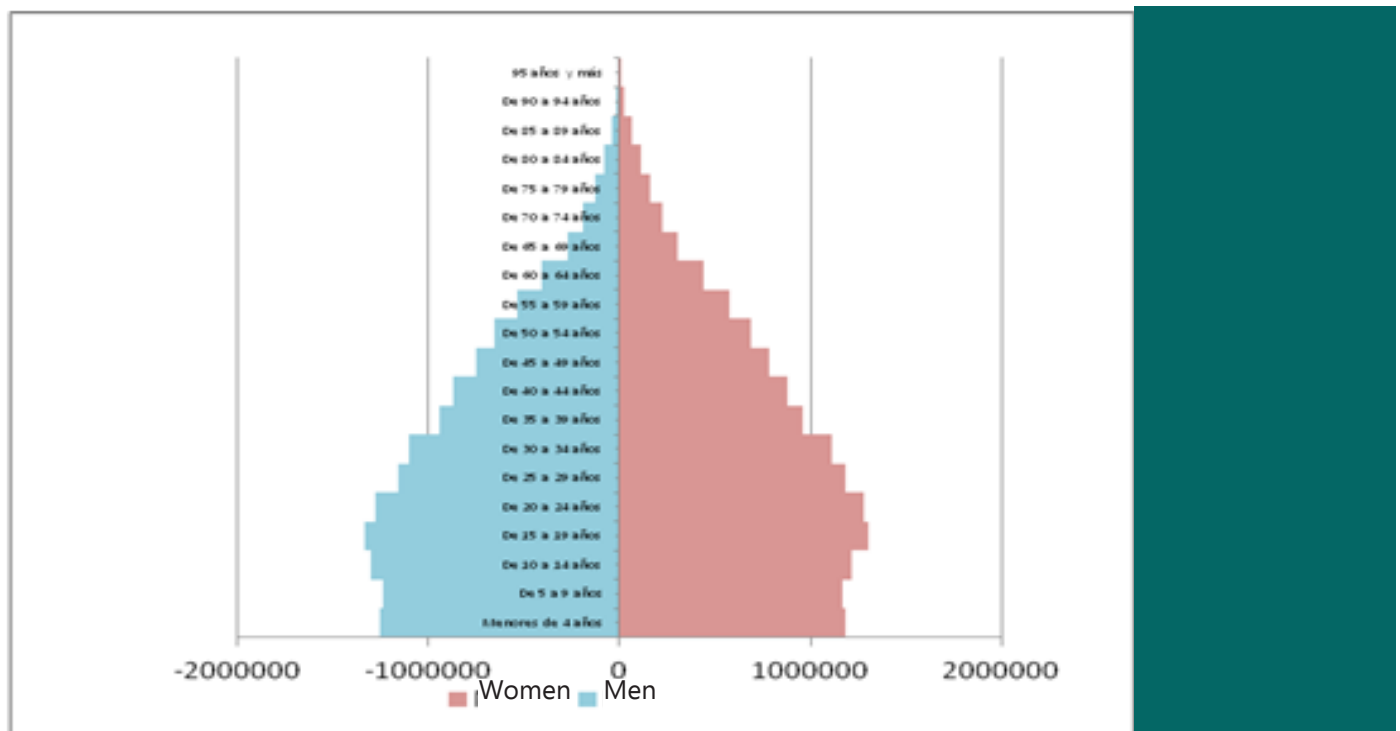
Bolivarian Republic of Venezuela

Country profile	Bolivarian Republic of Venezuela
Official language	Spanish
Population (2016)	30,851,343 inhabitants
Form of Government	Federal Presidential Republic
Head of State	President, Nicolás Maduro Moros
GDP Per cápita (2016)	12.820 US\$.
Foreign Direct Investment (FDI) (% of GDP) (2015)	1.6% (UN)
Gross Fixed Capital Formation (% GDP) (2015)	20,3%
Public expenditure on education (2015)	6,9% of GDP
Public expenditure on health (2015)	3,4% of GDP
Currency	The official currency is the Bolívar (VEF), with a system of foreign exchange control which has two rates: DIPRO (type: protected change) for essential products 10 Bs/\$ and DICOM (type: complementary change) for all transactions not contained in DIPRO. The floating rate is controlled by the BCV and starts at 206.92 Bs/\$1

Demography

Venezuelan population pyramid

Venezuelan population pyramid shows that the bulk of the Venezuelan population is between the ages of 10-24 years old, which results in a young population with aspirations to enter the labor market, after an average of 8.9 years of studies, representing an educated population that almost finish high school and that can become labor for any growing industry or development, also the Venezuelan population has a life expectancy at birth of 74.2 years .



Life expectancy at birth

74.2 years

HDI (ajusted for inequality)

0.612 (UN)

Population density (2015)

33.34 inhabitants per Km2

Mortality at birth

110 (deaths per 100,000 live births) (2015)

Expected years of schooling

14.2 years

Average years of schooling

8.9 years

Geography

Location:

Venezuela is a country located at the most northern point of South America, with coasts on the Caribbean Sea and the Atlantic Ocean. It has a land area of 916,445 km². Its borders are: Brazil and Guyana to the East, Colombia and Brazil to the South, Colombia to the West, and the Caribbean Sea and the Atlantic Ocean to the North. Because of its location, Venezuela enjoys a tropical climate with two seasons a rainy one and drought one, with temperatures ranging between 28 ° C.

Venezuela has four well defined regions:

1.- **Central-coastal Region:** Where the capital city, Caracas, is located. It is a region con-

sisting of coasts and is the seat of major cities that have international ports and industrial cities.

2.- **Andes Region:** Formed by Táchira, Mérida and Trujillo states; defined as the country's mountainous zone with agricultural settlements with banana, potatoes and coffee plantations.

3.- **Los Llanos Region (Plain region):** Consisting of plains and rivers and formed by Guárico, Apure, Barinas and Portuguesa states, it is the fertile land of the country for agricultural industry.

4.- **Guyanese massif:** In geological terms, it is the oldest part of the country, consists of large plateaus, and is the region with the largest mineral reserves.



Attractiveness

There are regulations affecting business efficiency in the country, such as exchange control, which puts the country in the position 182 in the world ranking. In terms of labor freedoms, Venezuela occupies position 181 in the world ranking and in the post 169 worldwide about freedom of business .

Doing Business 2016 classification puts the Venezuelan economy at No. 186 among 189 econ-

omies, taking into account aspects such as: operational aspects regarding the opening of a business, dealing with construction permits, getting electricity, registering property, obtaining credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency.

Venezuelan market is constituted by 30 million inhabitants, is the fifth largest GDP in Latin America, owns the largest proven reserves of crude oil in the world. Regarding to gas reserves, Venezuela possesses the eighth worldwide. Nev-

ertheless, there is need for renewal the national infrastructure (roads, rails, ports), industries and machinery.

Happiness Index

In addition to the basic economic indices it is important to know how does work the subjective well-being of the population of a country and evaluates the human being's ultimate goal: happiness. Because economic policies should enhance the usefulness of the population defined as the amount of pleasure, satisfaction or happiness of individuals ; to carry out the survey, people's opinion is asked by a series of questions. In this survey, Venezuelan people perceived themselves as a people with high levels of happiness. Venezuela in ranked in the 44th place, above El Salvador, Ecuador and Japan, but below countries such as France, UK, Colombia, Germany, Chile, Uruguay, among others .

Profitability

According to ECLAC, FDI decreased in 2014 by 80%, from 2,680 million dollar to 320 million dollar. In previous years had happened the opposite, because of the difficulty of repatriation of capital due to exchange controls, foreign companies tried to reinvest in the country in real estate sector. However, it is possible that because of the economic contraction in 2014, foreign companies have decided to back their investment because of reduced profits .

Marketing Channels

In Venezuela there are six commercial ports, whose customs are authorized to import, export and transit, as well as to provide services of transshipment, cabotage and postal packages :

1.- Port of Puerto Cabello: It is Venezuela's main port, located in Carabobo state. It is the sixth largest port in Latin America and the Caribbean. In terms of capacity, has a total regional foreland of 75%: to United States and Canada (20%), the Caribbean (17%), Colombia and Trinidad (15 %), South America East Coast (10%), Central America (8%) and South America West Coast (3%); to other ports in Venezuela, this port foreland is 15% and to the rest of the world 10%.

2.- Port of La Guaira: An artificial port located in Vargas state. It has a total of 26 docks, some of them are not operational, and its maximum depth of water is of 9,7 m.

3.- Port of Guanta: Located in Anzoátegui state, has 6 docks, and a maximum depth of water of 10,5 m.

4.- Port of Maracaibo: Located in Zulia state, has 12 docks, 8 of them remain operational and have a maximum depth of water of 10,97 m.

5.- Port of Sucre-Cumaná: Located in Sucre state, has two floating docks for general cargo and vehicles, its maximum depth of water is of 10,4 m.

6.- Port of Guaranao: Located in Falcón state. Currently, this port is operating only for refinery and industrial zone products import.

Regional agreements and trade blocs

- **ALADI (Latin American Integration Association):** Signed by Argentina, Brazil, Bolivia, Colombia, Chile, Cuba, Ecuador, Uruguay, Mexico, Panama, Paraguay, Peru and Venezuela, in which Venezuela signed a Regional Tariff Preference agreement, which decreases the proportion of ad-valorem duties stipulated to the tariff schedule.

- **MERCOSUR (Southern Common Market):** Signed by Argentina, Brazil, Uruguay, Paraguay and Venezuela, where the total elimination of taxes is agreed through the signing of three agreements: "Treaty of Asuncion", "Protocol of Ouro Preto" and "Olivos Protocol for the settlement of MERCOSUR disputes".

- **ALBA-TCP (Bolivarian Alliance for the Peoples of America- Treaty of the Peoples):** Signed by Venezuela, Cuba, Bolivia, Antigua and Barbuda, Dominica, Ecuador, Granada, Nicaragua, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname and as observers: Haiti, Iran and Syria. It is based on the use of hedge funds to reduce socioeconomic differences among its member countries.

Economic situation in Venezuela

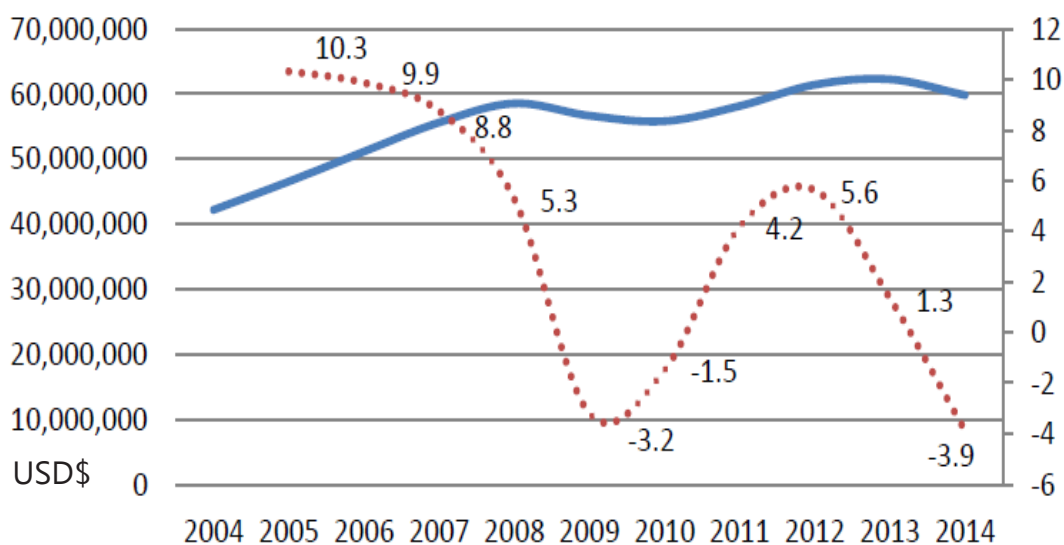
According to the data submitted by the Venezuelan National Bank (or Banco Central de Venezuela - BCV), Venezuelan economy shows very unstable levels of economic growth, with high rates (8% and 10%) in 2005 and 2007, while a sharp drop occurred in 2010, 2014 and 2015, with levels around -4%. (Chart 1.1)

Despite being an oil economy, the contribution of the oil sector in the country's economy is decreasing, representing only 11% of the Gross Do-

mestic Product (GDP), which is a worrying situation because this is the only productive sector participating in international trade, and which contributes 98% of income in foreign currency. (Chart 1.2)

Chart 1.1

GDP: Constant Prices (USD\$), 2004-2014

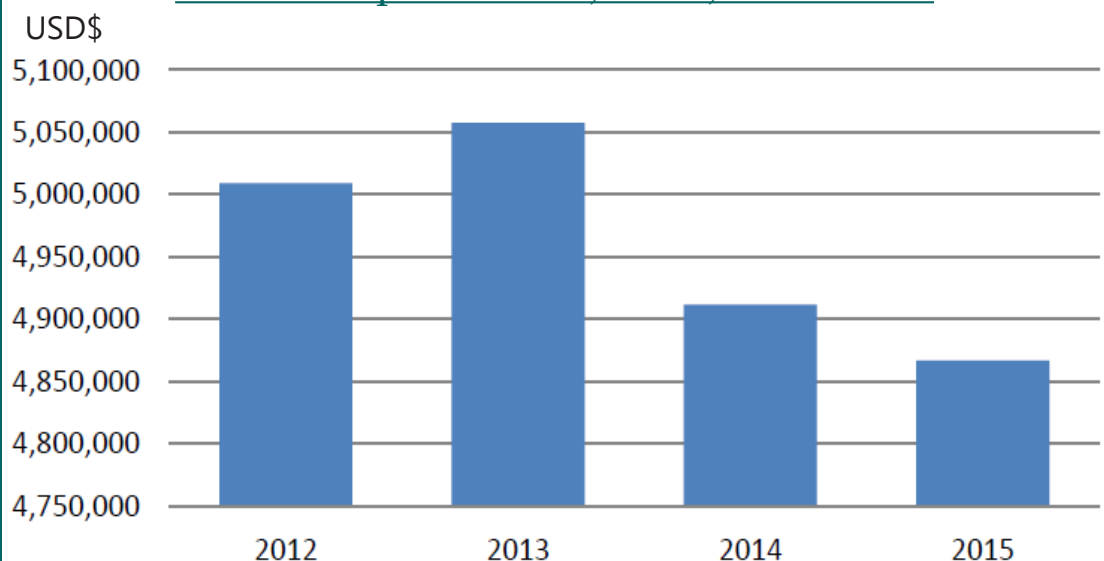


Venezuelan economy shows very unstable levels of economic growth, with high rates in 2005 and 2007, while a sharp drop occurred in 2010, 2014 and 2015, with levels around -4%.

..... Percent variation

Chart 1.2

Oil sector production, USD, 2012-2015

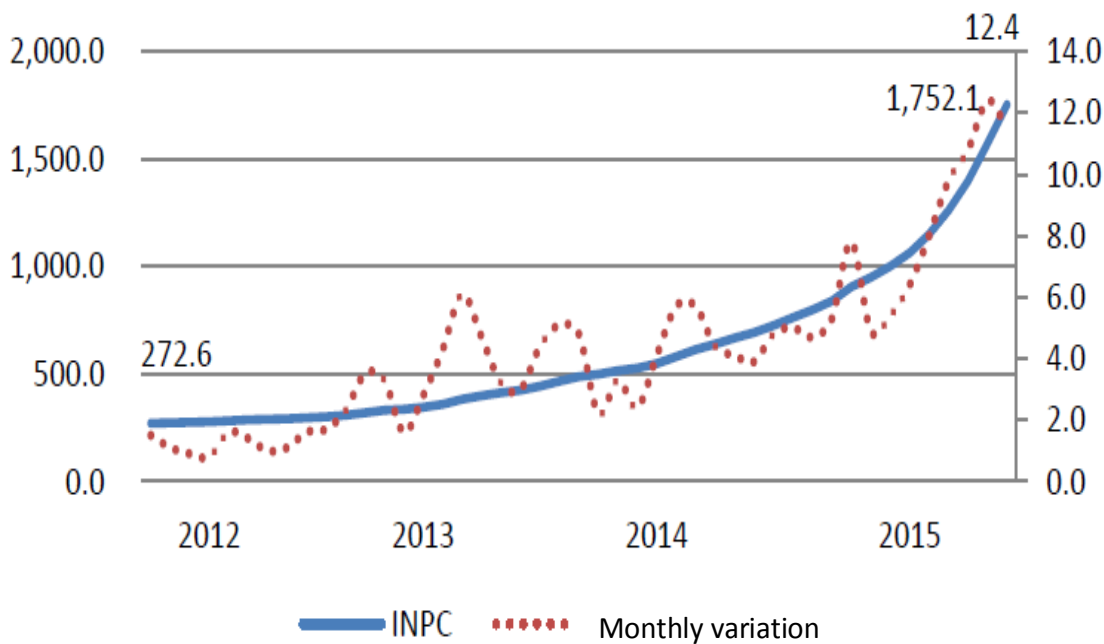


Despite being an oil economy, the contribution of the oil sector is becoming less to the national productive apparatus, representing only 11% of the Gross Domestic Product

The variation of prices is changing exponentially: prices are six times higher in the period between 2012 and 2015. Inflation in 2015 was 200%. In 2016, inflation rate is projected 600%. A month-on-month variation of 10% will represent an annual inflation rate of 313%. (Chart 1.3)

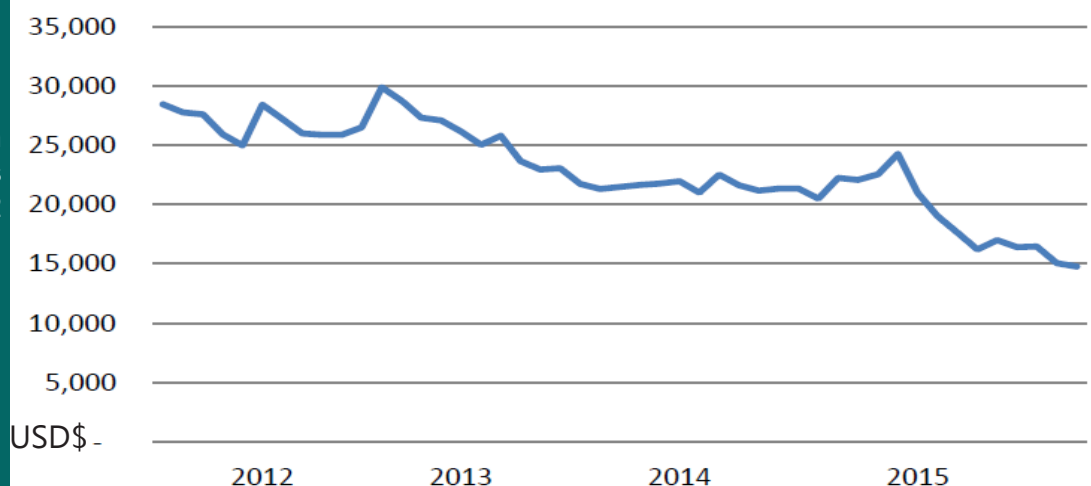
In the same period, international reserves have fallen to less than half, reaching levels as low as those of 12 years ago. This creates a strong pressure on their external balances. (Chart 1.4)

Chart 1.3
Price index, 2012-2015.
2007=100



The variation of prices is changing exponentially: prices are six times higher in the period between 2012 and 2015.

Chart 1.4
International Reserves USD, 2012-2015



International reserves have fallen to less than half, reaching levels as low as those of 12 years ago

The growth of external debt adds to the drop in international reserves, makes that the current coverage be less than 10%. That means the amount of the international reserves only pays 10% of the total external debt. By beginning of 2016, the country already had a trade deficit of 24 billion dollars. (Chart 1.5)

Venezuelan external debt is divided in two sectors: government owes 83%, and private sector owes the remaining 17%. At the same time, this is related to 25% of short term debts (less than

a year) and 75% of long term debts. Public and private commercial credits represent 19% of the external debt, while most are concentrated in bonds and other forms of loans.

As to the position of the reserve assets, Venezuela has decided to concentrate 70% in monetary gold, and this assets has had the same behavior as of international reserves. It has fallen almost by half: from twenty-one billion in 2011 to eleven and a half billion in 2015. Although public operations regarding monetary gold have not been made. The fall is evident in the Venezuelan

Chart 1.5

Relation between external debt and International Reserves, 2012-2015

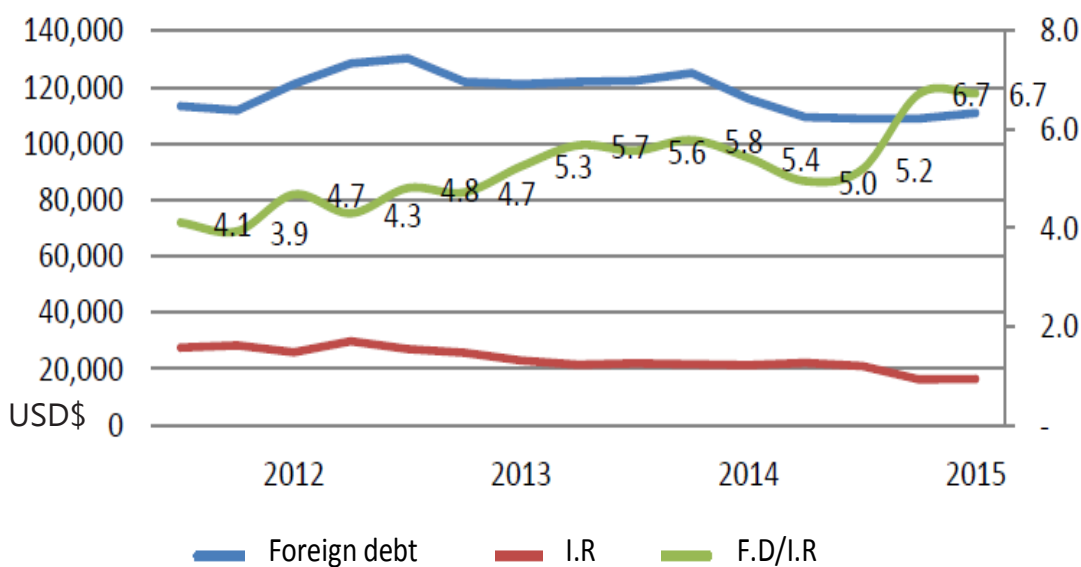
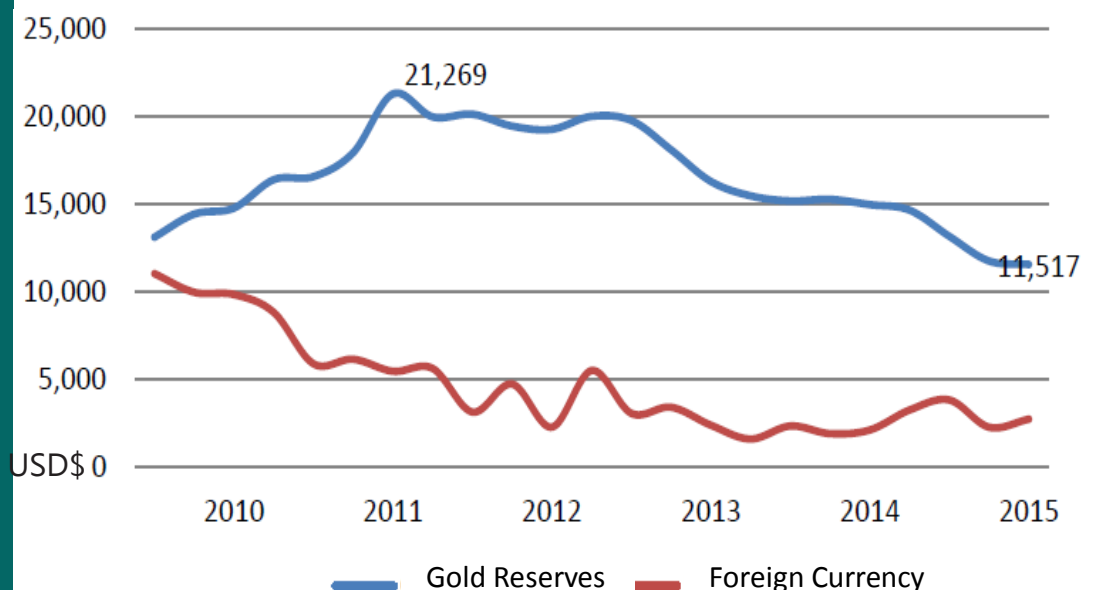


Chart 1.6

Reserve assets (gold and foreign currency), 2010-2015



National Bank's balance. (Chart 1.6)

The behavior of the balance of payments remains negative during the last six years, with the characteristic feature of maintaining positive trade balances, but capital outflows exceeding

this surplus. In 2015, for the first time in 20 years, quarterly reports show negative trade balance, mainly due to the fall in oil prices.

Chart 1.7

International Investment Balance (USD\$), 2010-2015

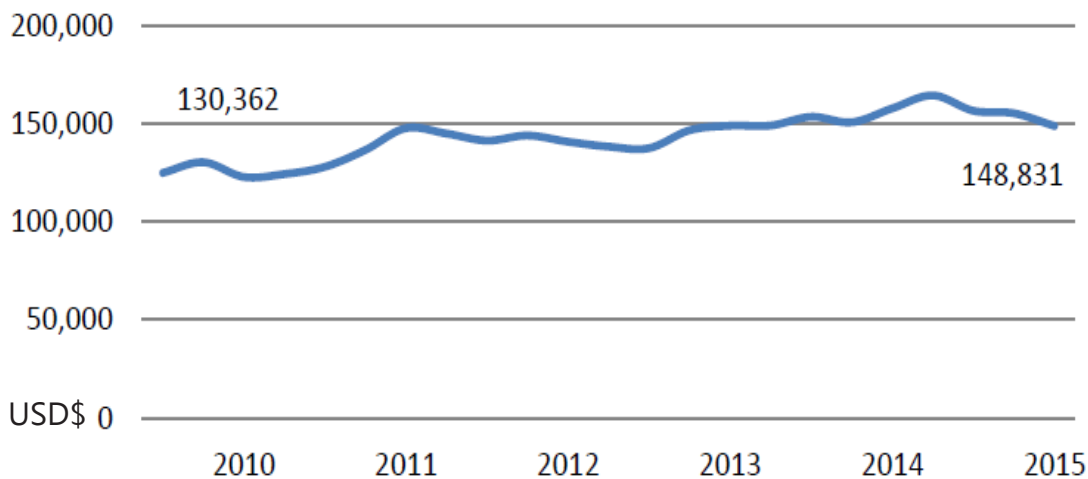
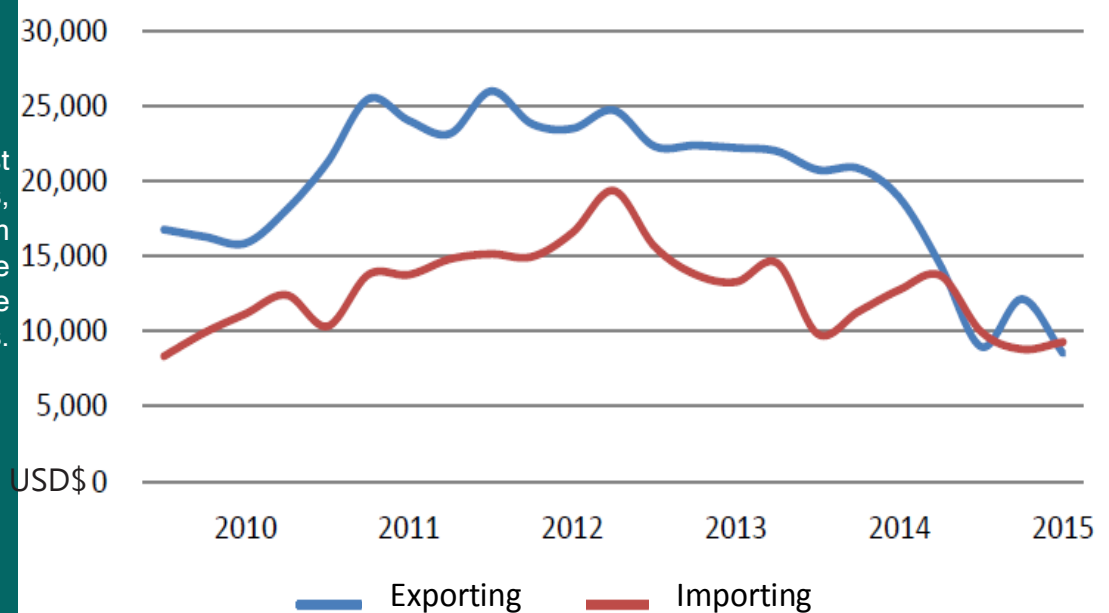


Chart 1.8

Trade Balance, 2010-2015

By 2015, for the first time in 20 years, quarters are shown with negative trade balance, mainly due to the fall in oil prices.



PART II

OIL AND GAS INDUSTRY

Oil and gas industry in Venezuela

Venezuelan oil and gas industry is owned by the state company Petróleos de Venezuela, S.A. (PDVSA), with a staff of 152,072 workers. Currently, PDVSA ranks fifth among the largest companies dedicated to oil business around in the world. According to Petroleum Intelligence Weekly (PIW) this criterion responds to transactions made in reserves, production, refining and sales.

It is important to highlight that PDVSA plans, coordinates, supervises and controls the activities of exploration, exploitation, transportation, manufacturing, refining, storage and marketing of oil and other hydrocarbons.

PDVSA activities are as follows:

- "Upstream" operations: includes activities of exploration, exploitation and improvement of crude oil located in five places: East, West, offshore, new developments and Orinoco Oil Belt. Gas business comprises the production and compression of gas.
- "Downstream" operations: includes activities of refining, trade and supply of crude oil and refined products, as well as gas processing to produce LNG, gas transportation and distribution, and the marketing of natural gas in the domestic market.

PDVSA's main goals in oil and gas are:

- To increase the level of crude oil production, to 6.000 b/d for 2019, of which 4.000 b/d will come from the Orinoco Oil Belt.
- To increase natural gas production to 10.494 Million cubic feet (MMCF) by the year 2019.
- To increase national refining capacity to 1.800 b/d by 2019.
- Increase national capacity for extracting natural gas liquids in 130.000 b/d.
- To strengthen the market diversification strategy with a target oil export for the year 2019 of 1.335 b/d in Latin America and the Caribbean and 3,162 b/d towards Asia, especially China, India and Japan.
- To expand the coverage of the distribution network of methane gas, reduce LPG consumption, provide a better quality of life and reduce environmental pollution, through the

laying of 8,626 km of pipelines and 16.818 km of internal lines to benefit 728,900 families.

- To build three thermoelectric plants with a total generating capacity of 2,100 MW.
- To develop Venezuelan offshore gas belt and reach a production capacity of 2,030 million cubic feet by the year 2019.

Characteristics of Venezuelan oil and gas industry

Oil and gas reserves in Venezuela

Venezuela ranks one in the world in terms of its proven oil reserves: 299,953 billion barrels (BBL). In Venezuela, hydrocarbons reserves are annually readjusted, considering variables as the volumes of oil and gas extracted, the injected gas and changes in reserves from discoveries of new deposits.

• Crude oil reserves:

Levels of proven crude oil reserves are 299.953 BBL (year 2014). So, with a level of production of 1,014 BBL (2,779 million b/d), including heavy and extra-heavy oil, reserves have a time of 296 years before its exhaustion.

• Natural gas reserves:

Natural gas reserves are 198 trillion cubic feet (TCF). In Venezuela, gas reserves are mostly of associated gas, which is produced together with crude oil and the other part of the proven reserves is developed. It is important to highlight that 910 MMCF on average are injected, to maintain pressure on some fields, equivalent to 34% of the produced natural gas (2.652 MMCF).

Oil and gas exploration in Venezuela

The activities developed by PDVSA focus on projects review, identification and maturation of new opportunities to incorporate and update the resource, base of Exploration, and proposing

seismic surveys and exploratory locations that support the plan in the short and medium term, in order to identify the required volumes of hydrocarbons.

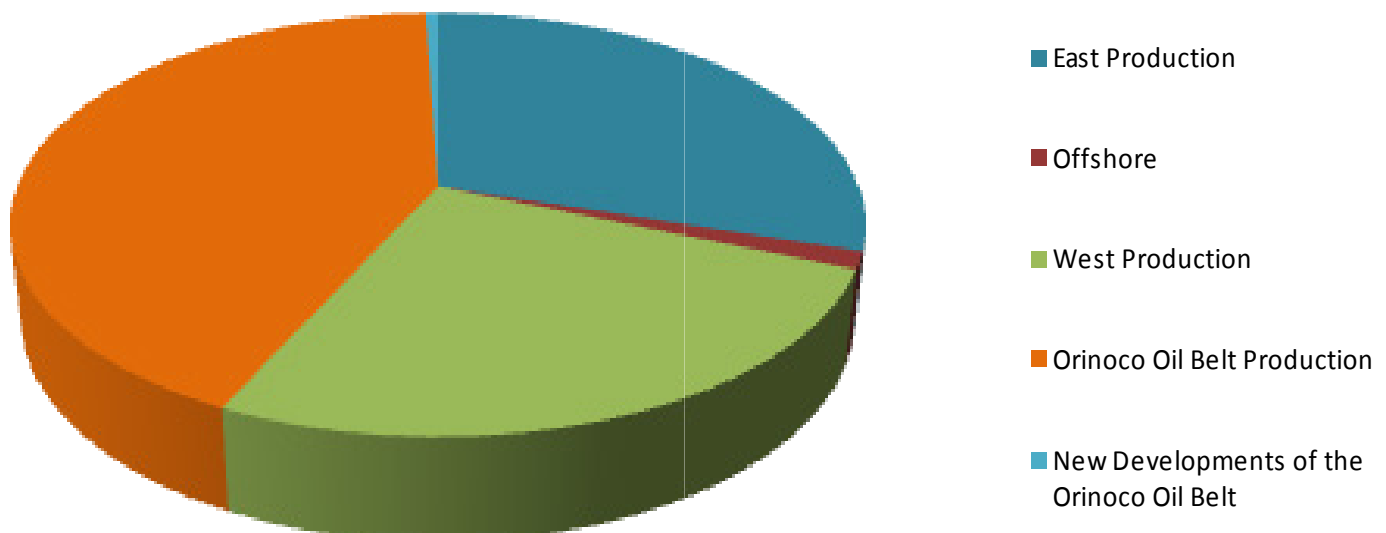
Oil and gas production in Venezuela

The production of crude oil plus total Nation Liquefied Natural Gas, attributable to PDVSA during 2014 was 2.899,1 b/d, which is divided as follows:

- East Production: 865,7 b/d (Direct management 829,6 b/d, Mixed Companies 16,6 b/d, PDVSA Gas 19,5 b/d)
- Offshore: (Mixed Companies 38,1 b/d)
- West Production: 750,3 b/d (Direct management 452,1 Mixed Companies 298,2 b/d).
- Orinoco Oil Belt Production: 1.228,3 b/d (Direct Management 446,5 MBD, Mixed Companies 781,8 b/d)
- New Developments of the Orinoco Oil Belt: 16,7 b/d.

On average, the total production of Nation Natural Gas was 7,422 million cubic feet, of which 2,604 million cubic feet were injected in order to maintain reservoir pressure. Net production of natural gas was 4.818 MMCF.

Chart 2.1
Oil production in Venezuela



PDVSA refining capacity

PDVSA performs refining activities in Venezuela, Curaçao, Cuba, Jamaica, Dominican Republic, United States; Sweden, England and Scotland. PDVSA refining capacity at global level is 2.822 b/d on average.

At national level, PDVSA has six refineries across the country: Amuay, Cardón, Bajo Grande, El Palito, Puerto La Cruz y San Roque.

The volume of crude oil processed in the National Refining System is 920.000 b/d on average (transfer to 4.000 b/d of residual crude oil processed is discounted of crude processed in El Palito refineries, in Puerto La Cruz). Additionally, 152.000 b/d of the received supplies are intended to processes and mixtures.

With that level of crude and supplies, 1.072 b/d of products are obtained, classified as follows: 325.000 b/d gasolines and naphthas, 310.000 b/d jet and distillates, 298.000 b/d waste, 12.000 b/d asphalts, 4.000 b/d lubricants and 123.000 b/d other products.

As far as international trade is a volume of 1.018 b/d: 476.000 b/d is processes are supplied by PDVSA and 132.000 b/d of supplies are intended for processes and mixtures. The volume of products, on average, is 1.150 b/d: 469.000 b/d gasolines and naphthas, 387.000 b/d jet and distillates, 122.000 b/d waste, 13.000 b/d asphalts, 9.000 b/d lubricants and 150.000 b/d other products and specialties.

International market: Trade and supply

Crude oil exports:

Exports of oil and derivatives of refining in Venezuela are 2.357 b/d, on average. Of total exports, 1.897 b/d (80%) correspond to crude and 460.000 b/d (20%) to refined products.

Geographically, Venezuelan crude market is divided as follows:

- North America: 761.000 b/d (40%)
- Asia: 694.000 b/d (37%)
- Caribbean: 312.000 b/d (16%)
- Europe: 109.000 b/d (6%)
- South America: 10.000 b/d (0,5%)
- Central America: 11.000 b/d (0,5 %).

In the case of refined products and LNG:

- Asia: 260.000 b/d (57%)
- North America: 76.000 b/d (16%)
- South America: 50.000 b/d (11%)
- Caribbean: 29.000 b/d (6%)
- Europe: 22.000 b/d (5%)
- Africa and other destinations: 17.000 b/d (4%)
- Central America 6.000 b/d (1%).

Finally, destinations for total exports were:

- Asia: 954.000 b/d 40%)
- North America: 837.000 b/d (36%)
- Caribbean: 341.000 b/d (14%)
- Europe: 131.000.000 b/d (6%)

- South America: 60.000 b/d (2%)
- Central America: 17.000 b/d (1%)
- Africa and other destinations: 17.000 b/d (1%)

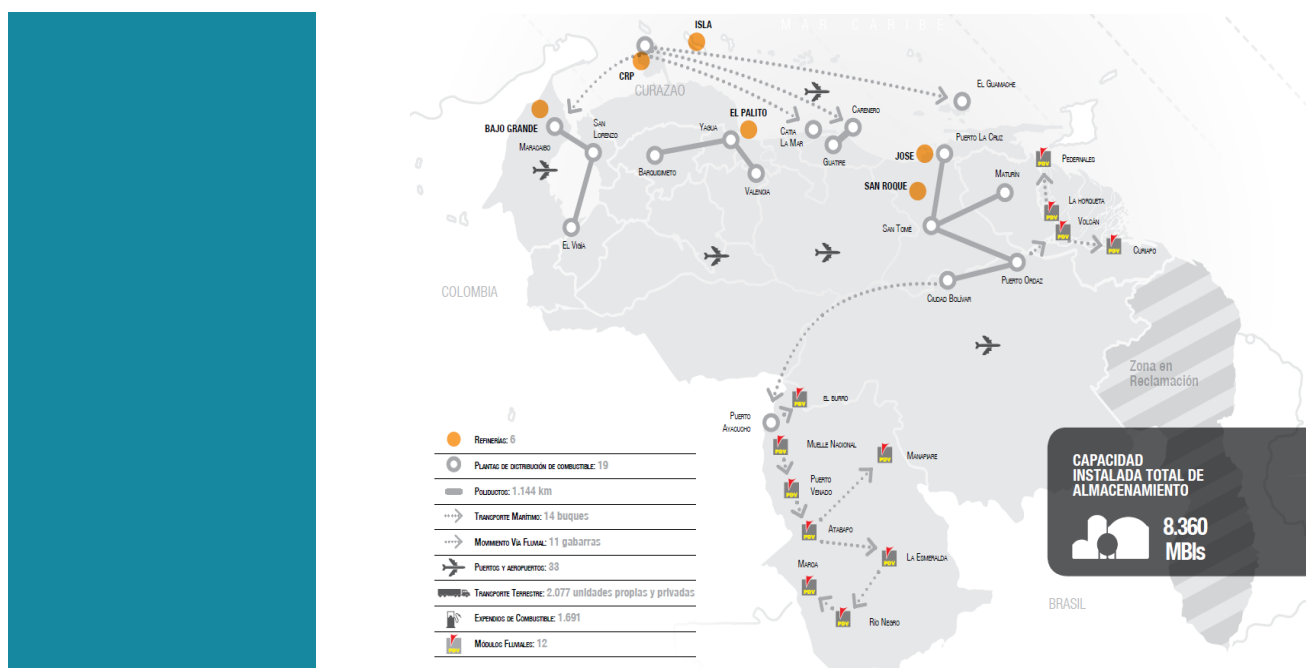
Other products:

With regard to the international marketing of retail products, Commercit, a PDVSA affiliated company, produced 5.6 million gallons of finished lubricants (equivalent to 132,6 MBIs) in 2014, together with international affiliated companies PDV Ecuador, S.A.; PDV Brazil Combustíveis e Lubrificantes, Ltda. (99% Commercit – 1% Tradecal) y PDV Guatemala Ltd. This represents an increase of 0,77 million gallons in relation to 2013.

Domestic market

For marketing in the domestic market, the installed storage capacity is 8,360 bbs. In addition, PDVSA has a capacity to carry 379.000 b/d via pipelines (1,144 km of interconnection systems) and 307.000 b/d via terminals (excluding the volume of Liquefied Petroleum Gas transported and the supplies imported for processes). It also has a bottling plant of finished lubricants for automotive, industrial and electrical sectors with a production capacity of 3,35 MBD.

Venezuela has 1,691 fuel expenders (EE / CC) across the national territory.



Transport, cargo ships and oil tankers

The shipping industry operates with 83 ships that make up the own controlled fleet: 28 own cargo ships (26 PDV Marina and two Transalba), 29 cargo ships of mixed and allied companies and 26 cargo ships contracted to third parties. These 83 ships handled a total of 684 MMBBL of hydrocarbon in 2014.

The average volume of black products (crude and waste) handled is 481 MMBLs by 40 cargo ships, of which 236 MMBBL were mobilized by PDV Marina, and the remaining by a fleet controlled by third parties.

For national transport activity, Venezuela works with the National Transport Company (ENT), which aims to comply with the Organic Law on Reorganization of the Domestic Market of Liquid Fuels. After 2014, PDVSA took control of all service stations in the country and now controls 60% of transport of fuel. The ENT carries 413.000 b/d on average, 306.000 b/d of them are mobilized by using PDVSA own fleet, equivalent to 74% of all liquid fuels mobilized per day. The remaining liquid fuels, 107.000 b/d (26%), is transported to domestic market by using private fleet.



PART III

PDVSA INVESTMENT PLANS: OIL AND GAS

PDVSA Investment plans: oil and gas

PDVSA investment plans and major projects.

According to PDVSA annual report for the year 2014, the investment plan for the period 2104-2019 is of 302 billion dollars to reach a production of 6.000 b/d of crude oil, 10.494 MMcf/d of gas, increase national capacity for liquid extraction from natural gas to 130.000 b/d and raise refining capacity to 1.800 b/d.

To reach all proposed goals, PDVSA is developing the following projects:

a. Associated projects to the value chain of oil business:

- Integral Project of Exploration (PIEX).
- Growth in production of extra-heavy crude by PDVSA's own efforts (Morichal, Cabrutica, Junin Sur, Boyacá, Ayacucho) and with existing joint venture companies (Petrocedeno, Petropiar, Petromonagas, Petrolera Sinovensa).
- Development of joint venture companies: Petrojunin, Petrocarabobo, Petroindependencia, Petrovictoria, Petromacareo, Petromiranda y Petrourica.
- Araya Terminal for Storage and Shipping of crude (TAEICA), Terminal for Storage and Shipping of crude and solids (TAECSO) and Punta Cuchillo Terminal Storage.
- Pipelines and tank farm Junin-Carabobo-Araya.
- Carabobo and Junin industrial condominiums.
- Infrastructure for handling early production of the Orinoco Oil Belt.
- Thermoelectric plants based on petroleum coke in Jose, Junin and Carabobo.
- Petrobicentenario Refinery and Cabruta Refinery.
- Deep conversion of Puerto La Cruz Refinery; and medium and deep conversion of El Palito Refining complex.
- Replacement of the pipeline for Los Andes Supply System (SUMANDES).
- Construction of the pipeline: Puerto La Cruz-Maturin; El Palito-Barquisimeto; Falcon-Zulia (SUFAZ).

- Expansion of the fleet of transport of crude and products incorporating four (4) Product tanker, eight (8) Panamax, four (4) Aframax, four (4) Suezmax, and four (4) Gas Carrier.

- Expansion of the gas injection system north of Monagas (PIGAP I, II and III).

- Compressor Plants: Sorocaima (Replacement PC Bachaquero I), Negra Hipólita (Replacement PCTJ -2) and Negro Primero (Replacement PCTJ-3).

- Steam Generation in East Coast Lake: plan steam generation and steam generators acquisition of Tia Juana, Lagunillas and Bachaquero.

- El Furrial new facilities (NIF).

b. Associated projects to the Value Chain of gas business:

- Development of Venezuela Gas Belt: Gran Mariscal Sucre Project and Cardón IV Project (Rafael Urdaneta).

- Expansion of gas transport system for domestic market, Pipelines: Anaco-José, Anaco-Barquisimeto y Ulé-Amuay; construction of pipelines José Francisco Bermúdez (SINORGAS), Norte Llanero Phase I and Orinoco-Apure.

- Deep extraction plants of LNG Pirital I, Soto I, IV Train of San Joaquín and LNG fractionation plant José V.

- National gasification for the supply of gas for residential use.

- Increased compressibility of low and medium pressure gas in northern Monagas and the Orinoco Belt.

c. Other projects different from activities of oil business

- Autogas Project
- Olefinas III (Ana María Campos Petrochemical complex), Sulphuric Acid Plant and Phosphoric Acid Plant (Morón Petrochemical Complex) and expansion of production train from the phosphate mine.

PART IV

OPPORTUNITIES FOR INDIAN COMPANIES IN OIL INDUSTRY OF VENEZUELA

Possible areas of interest to invest in industry

Areas of interest to invest in industry

Supply equipment

Given the importance of the oil industry for the Venezuelan economy, it represents a sector of high demand for equipment and constant supply of all kinds of materials, tools, clothing and services in the oil and gas industry, such as: forged fittings, flanges, welding fittings, plates, gaskets and seals, pipes, adapters, high pressure valves, special suits, diving equipment, hoists, pumps and equipment, among others.

Maintenance and repair

Constantly, PDVSA requests via international bidding, maintenance and / or repair of equipment in wells, maintenance of electrical substations, connections of pipes, pumps in area, among other aspects of the oil and gas industry.

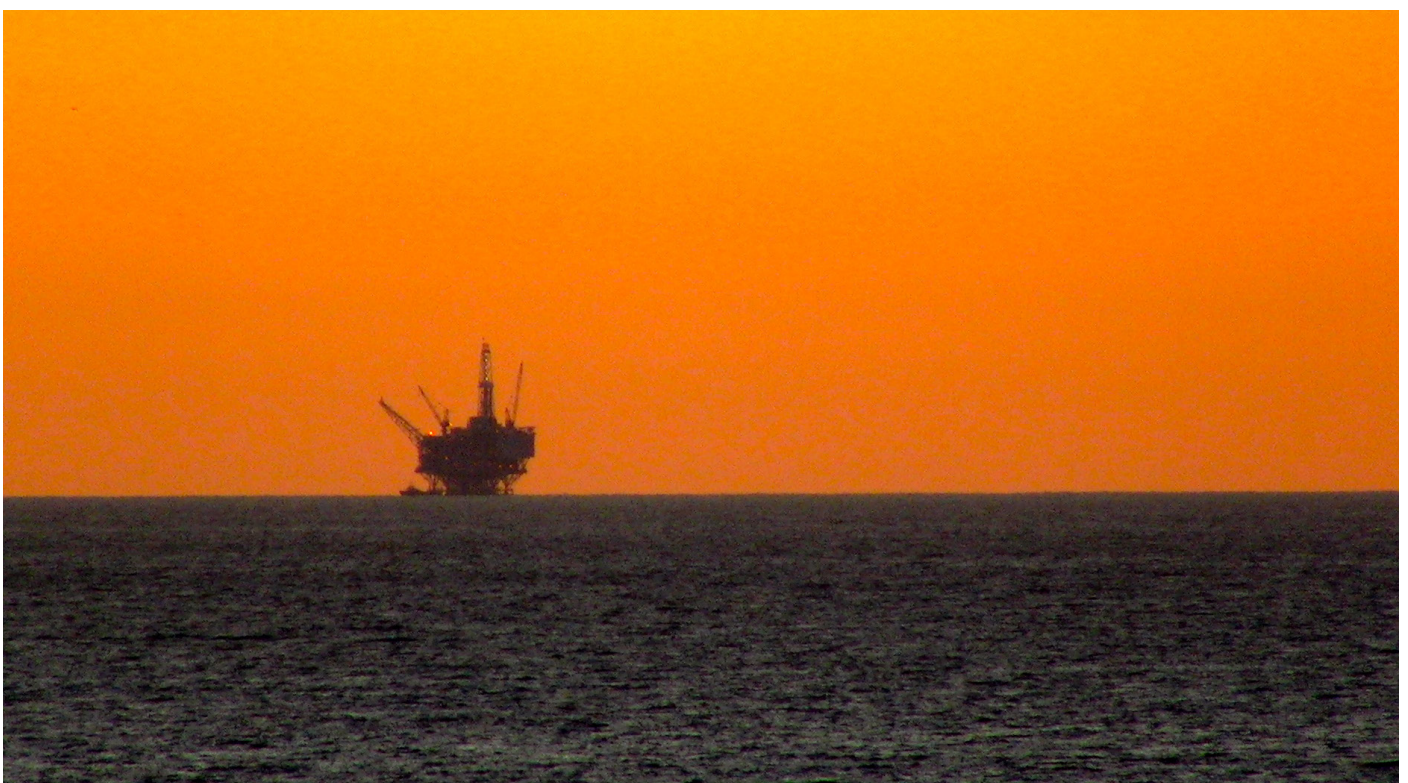
Development of industrial works

Currently, PDVSA requires design, manufacture, supply and assistance for the construction of:

- Nitrogen Plant
- Pipeline
- Recycle gas compression units
- Platforms in Wells
- Construction of a terminal for crude storage and shipping

Partnership with PDVSA through joint ventures:

- Development of refineries
- Development of thermoelectric plants
- Development of a system for gas transport by pipeline for the domestic market
- Implementation of a payment system in fuel service stations
- Technology for the improvement of extra-heavy crude oil
- Development of a program for liquid gas exportation, in order to satisfy the demand in Latin America.



Final Considerations

- Commercial relations between Venezuela and India related to oil matter, present wide advantages, because of the large extra-heavy oil reserves owned by Venezuela and technological development in the improvement of Indian crude, what makes them potential partners in the long term.

- India could use the commercial gap existing now between Venezuela and United States of America to directly compete with China to supply equipment, tools and pieces for the Venezuelan oil and gas industry.

- The low oil refining in Venezuela could be an advantage for India to develop its own refineries in Venezuela. Venezuela being the country with the largest proven oil reserves in the world,

its geographic location allows competitiveness in Latin America and the Caribbean markets.

- The pipeline construction would generate a market niche ideal for India for the development of industrial technological processes in the gas sector. It is important to emphasize that Venezuela does not full benefit for gas exploitation, which could be an aspect to be developed by India and maintain an almost exclusive position in this sector. (Considering the long timeline related to the development of pipelines and increasingly important trends in technology to obtain liquid natural gas to be exported by tankers).

Note: The information shown in this survey is supported by PDVSA annual report, years 2012, 2013 y 2014; Venezuela National Bank (BCV) year 2015 and other specialized sources on oil and gas industry.